



Transportation Advisory Committee

Date: April 12, 2023

Time: 7:00 PM – 9:00 PM.

Location: Conducted via Remote Participation (Zoom).

Minutes.

1. Administration.

Members in Attendance: John Aslanian, Beth Benedikt, Bill Copithorne (DPW), Lenard Diggins, Melissa Laube, Jeff Maxtutis, Scott Smith, James Stubbe, Laura Swan (Chair), and Shoji Takahashi.

Members Absent: Tycho Nightingale and Corey Rateau (APD).

Members of Public in Attendance: Paul Schlichtman, Jonathan DeVito, Jim Doherty, Carol McDonald, Julia Mirak, Daniel St. Clair, Petru Sofio, and Bryan Zimolka.

The Chair provided notice regarding Remotely Conducted Meetings, referring the members to the agenda attachment entitled "Governor Charles Baker's 3/12/2020 Executive Order Suspending Certain Provisions of the Open Meeting Law". The Chair reviewed the meeting ground rules and announced that the meeting was being recorded.

Laura Swan informed TAC that remotely conducted meetings can be held through March, 2025.

B. Approval of March 8, 2023 Meeting Notes.

Minutes for the Meeting of March 8, 2023, were approved, subject to the change in Section 7(B) by Scott Smith:

"(B) Warren St is a significant bicycle route with fairly low overall parking occupancy. Consider 14' centerline to curb extension to facilitate bikes and motor vehicles sharing the road when parked cars are not present."

C. Nominating Committee formation

Scott Smith and Jim Stubbe will serve on the Nominating Committee.

D. Correspondence sent/received from 3/4/23 to 4/6/23.

1. "Comments on 10 Sunnyside Comp Permit," memo to DPCD from TAC 4/10/23.
2. "Crosswalk Concerns near Jason St, Hillsdale Rd, Pleasant View Rd," Letter from the Select Board to TAC, 3/6/23.

2. Public Comments (for information only, not for action).

RE: Mass Ave/Appleton St Parking Study: Daniel St. Clair represents the developer of 1165R Mass Ave on the Mirak Property. The businesses on the northside of Mass Ave between Forest St and Quinn Rd did not know that a parking study was conducted; they are in the process of conducting a parking study.

Daniel St. Clair also noted that a new traffic light was being proposed at Forest St and Mass Ave. The developer had conducted a warrant analysis and did not find that a traffic light is needed at that intersection. The developer and businesses are concerned that a queue of automobiles stopped at the traffic signal will block entrance/egress to the businesses.

Laura Swan responded that the Select Board asked TAC to assess the methodology of a parking study conducted by DPCD. Len Diggins added that the Design Review Committee (DRC), established by the Town Manager, is leading the Mass Ave/Appleton St project. The Town Manager and Claire Ricker are the points of contact.

3. Town Issues/Activities (not already on the agenda).

A. Update from the Department of Public Works (DPW).

Construction season is underway. Bill Copithorne said that construction on the Chestnut St pedestrian safety project began Monday and is scheduled for 16 weeks. Today was probably the most challenging for traffic delays as roadworkers were performing the leveling course. There will be disruptions until final paving is completed.

Curb and sidewalk work is occurring on Amsden St, Waldo Rd, and Windsor St. Curb ramps projects will begin May 1 throughout the Town.

The Town received a grant from MassDOT for installing a speed-feedback signs on River St near Thompson School. The paperwork is being finalized between the Town and the Commonwealth. After the signs are installed, the Town will need to do traffic data collection.

Scott Smith remarked about the proposed construction to replace the decking on the Town-owned bicycle and pedestrian bridge near Alewife Station along the Minuteman Bikeway. He observed that the approaches to the bridge do not conform to ADA as the rise is more than 1" at the bridge. He inquired about plans for detouring bicycle traffic during construction: if construction is short in duration, then detouring bicycles to riding on the sidewalk is probably fine; if construction is long in duration, then then bicycles would need to-be detoured to the access road from Route 2. He asked that ABAC be informed of plans.

Petru Sofio asked if the Town contacted MassDOT to receive signage on 4'-passing distance by bikes, which would be useful for Mass Ave and River St. Bill Copithorne will follow up.

B. There was no update from the Department of Planning and Community Development (DPCD).

C. There was no update from the Police Department (APD).

4. Update: Summer St Crosswalk near Sunset Rd

Following up on the March TAC Meeting, Wayne Chouinard and Bill Copithorne of DPW met with Laura Swan, Jeff Maxtutis, Shoji Takahashi, and Scott Smith at Summer St and Sunset Rd on Friday, March 31, in the afternoon around the time of Peirce School dismissal. DPW summarized the challenges of installing the crosswalk at the location.

The group examined a possible midblock location for the crosswalk ~50' west of the Sunset Rd intersection, and it decided that this midblock location is a better location for the crosswalk. DPW will develop a design plan and confirm that there will be no issues with installation in the alternate mid-block location.

5. Vote: Downing Square Signage

Melissa Laube provided a summary of the draft memo to the Select Board. The graphic in the memo shows proposed placard installations on the same, existing stop-sign poles. Some poles may need to be replaced so that placards are 7' above the ground. This conforms with MUTCD. It might improve the situation and dispel confusion.

Jeff Maxtutis continued that Downing Square is a confusing intersection, and the Working Group did not want to add to the confusion. It examined other options such as a map on each approach but decided against it.

A motion to send the recommendation memo to the Select Board was approved unanimously.

6. Vote: Mass Ave and Appleton St Parking

Jeff Maxtutis provided background information that the Select Board requested TAC to review of a parking study in the area of Mass Ave and Appleton St. The data were collected by DPCD in October, 2021, when schools were in session; it is not known if businesses in the area were impacted by COVID-19 at that time. Data were not collected on Sunday; St. Athanasius the Great Greek Orthodox Church is adjacent to the survey area.

Jeff Maxtutis disclosed that he conducted the survey on Saturday, October 16; he did not analyze the data or draft the parking study report.

Melissa Laube and Jeff Maxtutis have professional experience in this area, and they reviewed the technical elements of methodology. The survey was conducted according to MAPC parking methodology, which is consistent with other industry standards. The parking study conclusion appears correct based on the data collected. There are times when parking utilization is quite a bit higher than average. It is important to examine particular spaces and businesses; interpretations of data may vary.

The removal of some parking spaces can be accommodated in the area. However, the area is being redeveloped, and parking demand might be affected as land use changes.

Petru Sofio asked about the duration of vehicle parking and turnover. Some vehicles remain parked for more than 2 hours, which creates problems with parking efficiency. Jeff Maxtutis responded that they had no disagreement with the turnover methodology of the parking study. He personally observed a number of automobiles parked for the day during his observations on October 16.

Len Diggins pointed out the large difference between northside and southside parking. He asked if there was no northside parking would drivers turn around and park on the southside?

Jeff Maxtutis responded that such movement was not captured in the data. One would need specific observations.

Daniel St Clair agreed that the methodology is typical of parking studies. A question is whether the data from October, 2021, is indicative of full post-

pandemic business. He also noted that parking on Mass Ave between Quinn Rd and Forest St has very high utilization during peak hours.

Len Diggins stated that TAC does not need to wait to vote on this parking study memo. The developer can conduct its own parking study and submit it to the Select Board. The Select Board will need to approve traffic and parking changes to this area.

A motion to send the parking study memo to the Select Board was approved unanimously. (Bill Copithorne abstained.)

7. Update: Wachusett Ave and Appleton St

Jim Stubbe provided a summary review of the intersection. The Working Group is considering two ideas: (1) traffic oval to order movement; and (2) curb changes to tighten up the geometry of the intersection.

Jeff Maxtutis added that traffic volumes are not high. Crossing the intersection on foot is challenging, and MBTA buses travel on Appleton St to Wachusett Ave. He recommends conducting traffic counts and turning movements (right, left, straight). TAC can obtain rolling-stop data if the counts are done by video, which adds cost. Notably, in Downing Square, stop compliance improved by tightening the turning radii.

Shoji Takahashi asked about a draft proposal presented by Daniel Amstutz on closing Valentine Rd at the intersection. Jim Stubbe responded that closing Valentine Rd does not address speed through Appleton St, which needs traffic calming.

8. Discussion: Data Collection

Laura Swan noted that this is a good time of year to obtain traffic data, and TAC has a budget from the Town. Obtaining counts in multiple areas from a single contractor is efficient, and she asked TAC to think about areas that would be useful to collect data.

Scott Smith suggested the neighborhood by Lesley Ellis, where a driver hit a child recently, and Broadway near the new development on Sunnyside Ave.

9. Discussion: Thompson School

Laura Swan and Scott Smith provided an overview of a draft memo. Wellesley Rd residents requested a one-way direction for the road. Wellesley Rd does not have a sidewalk.

People would park there and walk to Thompson School. There are many private ways in the area, and a one-way Wellesley Rd would cause traffic to divert onto other private ways. Wellesley Rd and others in this area are on a list for sidewalk installation when funding becomes available.

The recommendation is to retain two-way traffic on Wellesley Rd, and paint crosswalks and edge lines. The Memo will be brought to TAC for vote at the next meeting.

10. Update: 10 Sunnyside Comp Permit

Scott Smith and Beth Benedikt provided email comments expressing concern on the number of parking spots and limitation of bus service on Broadway. Beth Benedikt pointed out recent MBTA bus service reductions, which makes a challenging situation for residents. Parking in this area is very tight, and it is a faulty assumption that people will not rent at this location if they have a car.

Laura Swan agreed that it is challenging to find places for people to park off street in this neighborhood. She said that Corey Rateau (APD) noted that in other places with parking limitations, residents were challenged to find a place for their car.

Jeff Maxtutis asked whether any parking spaces were reserved for shared vehicles (such as ZipCar), and what percent of parking spaces would have EV charging units. He said that one space per unit is in line with MAPC guidelines.

Scott Smith countered that Clarendon Hill, a potentially comparable project in Somerville, has more spaces per unit. <https://clarendonhill.org/library/>

Len Diggins asked if Clarendon Hill is a true comparable. For example, how are the units similar? He expressed that shared vehicle space should be considered, and he recalled EV spaces were in the plan.

11. Discussion: Gray St

A Crosswalk on Gray St at Churchill Ave was evaluated by TAC in 2013. The study recommended that a crosswalk not be installed at Churchill Ave due to limited sight distance. Instead, consider a crosswalk at Valley Rd if sufficient number of students use the bus stop. Beth Benedikt, Bill Copithorne, and Laura Swan volunteered to conduct counts to see if a crosswalk at Valley Rd should be considered.

12. Discussion: Crosswalk Safety Group

TAC established a Working Group to develop processes on standards for evaluating crosswalks. It will look at standards, treatments, and approaches in the Commonwealth and particularly neighboring municipalities on making recommendations. The Working Group will communicate with DPW.

13. Discussion: Warren and Rawson

Bill Copithorne presented stopping sight distance data of the existing conditions at the intersection (Appendix A). The desired stopping sight distance at 25 mph is 280', and minimum stopping sight distance is 155' (DOT). The sight distance at the intersection is limited by existing buildings, trees, and parked vehicles.

To increase sight distance, on-street parking spaces can be removed. Street trees can be trimmed, and if they are removed, not replanted in the same location. (E.g., notify the Tree Warden not to replant trees at certain locations due to sight distance.)

Scott Smith said that this is a high-crash location with a large volume of automobiles. He provided links to previous reports:

<https://www.arlingtonma.gov/home/showpublisheddocument/2606/635367837220470000>

<https://www.arlingtonma.gov/home/showpublisheddocument/2574/635367836803270000>

Laura Swan noted that pedestrian bump outs are being considered on Warren St. In addition, Gibbs School directs students to cross at the intersection of Rawson Rd and Warren St. We can consider enhanced pedestrian crosswalk at this location.

Bill Copithorne said that DPW conducted pedestrian counts along Warren St, and he will provide them to TAC.

The meeting was adjourned at 9:30 pm.

Existing Conditions

View to West



at edge Warren

View to East



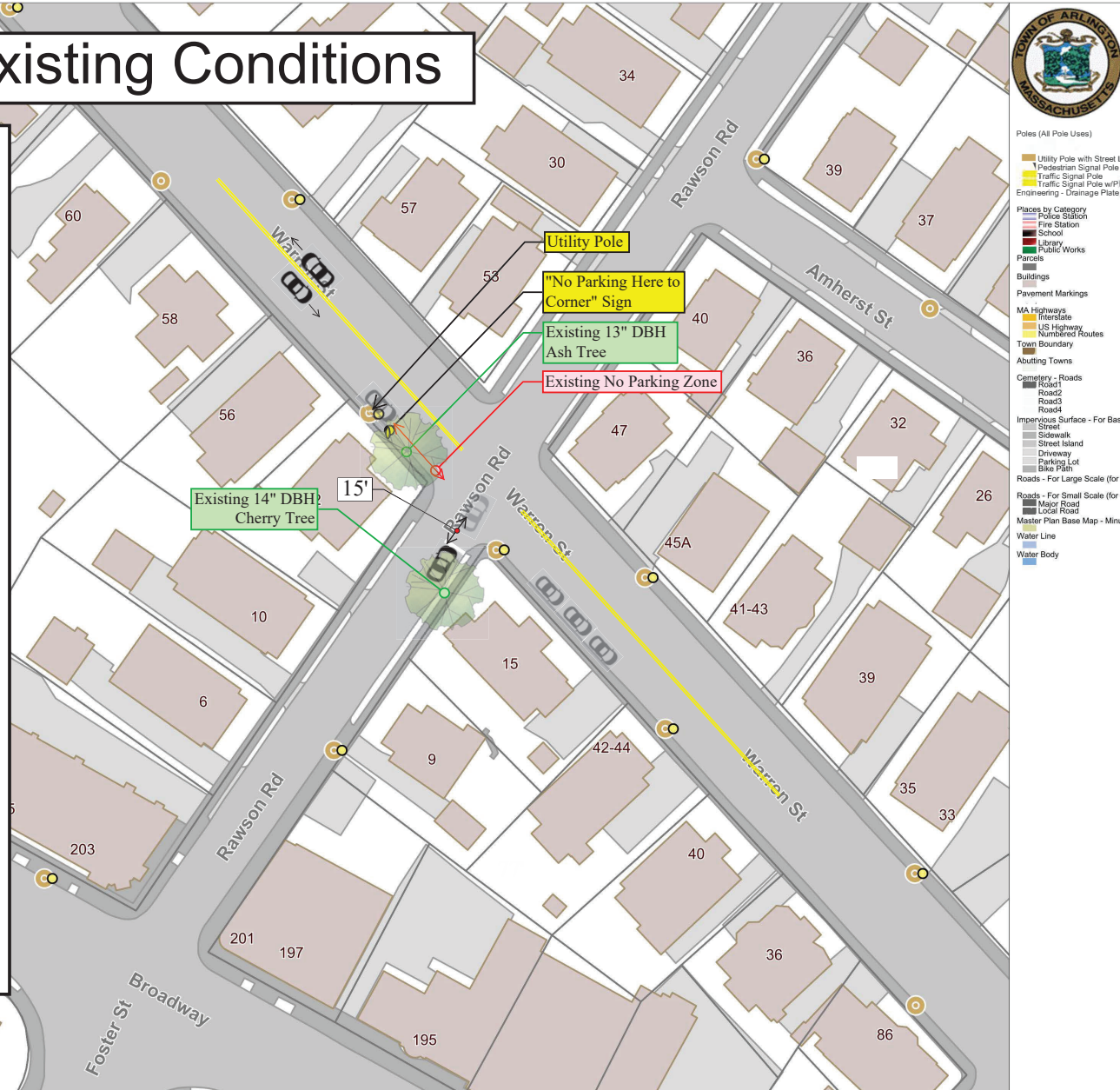
at edge Warren



at Stop Bar



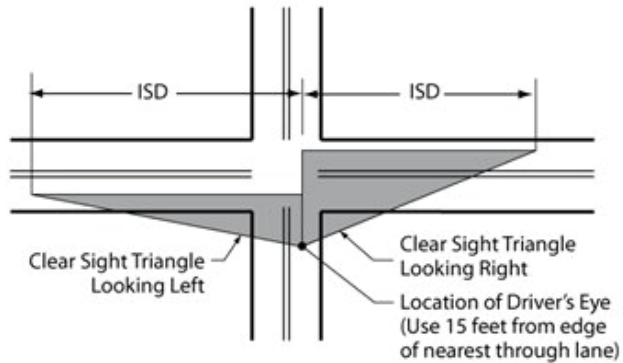
at Stop Bar



Rawson Road at Warren Street Intersection

CLEAR SIGHT TRIANGLE

Figure 3. Sight Distance Triangles for 4-Leg Stop-controlled Intersections⁹



STOPPING SIGHT DISTANCE

AASHTO Sight Distance

Scenario 1: Stopping Sight Distance on Level Roadways

Table 3-1. Stopping Sight Distance on Level Roadways

| U.S. Customary | | | | | Metric | | | | |
|--------------------|------------------------------|--------------------------------|---|-------------------------------------|---------------------|-----------------------------|-------------------------------|--|------------------------------------|
| Design Speed (mph) | Brake Reaction Distance (ft) | Braking Distance on Level (ft) | Calculated Stopping Sight Distance (ft) | Design Stopping Sight Distance (ft) | Design Speed (km/h) | Brake Reaction Distance (m) | Braking Distance on Level (m) | Calculated Stopping Sight Distance (m) | Design Stopping Sight Distance (m) |
| 15 | 55.1 | 21.6 | 76.7 | 80 | 20 | 13.9 | 4.6 | 18.5 | 20 |
| 20 | 73.5 | 38.4 | 111.9 | 115 | 30 | 20.9 | 10.3 | 31.2 | 35 |
| 25 | 91.9 | 60.0 | 151.9 | 155 | 40 | 27.8 | 18.4 | 46.2 | 50 |
| 30 | 110.3 | 86.4 | 196.7 | 200 | 50 | 34.8 | 28.7 | 63.5 | 65 |
| 35 | 128.6 | 117.6 | 246.2 | 250 | 60 | 41.7 | 41.3 | 83.0 | 85 |
| 40 | 147.0 | 153.6 | 300.6 | 305 | 70 | 48.7 | 56.2 | 104.9 | 105 |
| 45 | 165.4 | 194.4 | 359.8 | 360 | 80 | 55.6 | 73.4 | 129.0 | 130 |
| 50 | 183.8 | 240.0 | 423.8 | 425 | 90 | 62.6 | 92.9 | 155.5 | 160 |
| 55 | 202.1 | 290.3 | 492.4 | 495 | 100 | 69.5 | 114.7 | 184.2 | 185 |
| 60 | 220.5 | 345.5 | 566.0 | 570 | 110 | 76.5 | 138.8 | 215.3 | 220 |
| 65 | 238.9 | 405.5 | 644.4 | 645 | 120 | 83.4 | 165.2 | 248.6 | 250 |
| 70 | 257.3 | 470.3 | 727.6 | 730 | 130 | 90.4 | 193.8 | 284.2 | 285 |
| 75 | 275.6 | 539.9 | 815.5 | 820 | 140 | 97.3 | 224.8 | 322.1 | 325 |
| 80 | 294.0 | 614.3 | 908.3 | 910 | | | | | |
| 85 | 313.5 | 693.5 | 1007.0 | 1010 | | | | | |

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

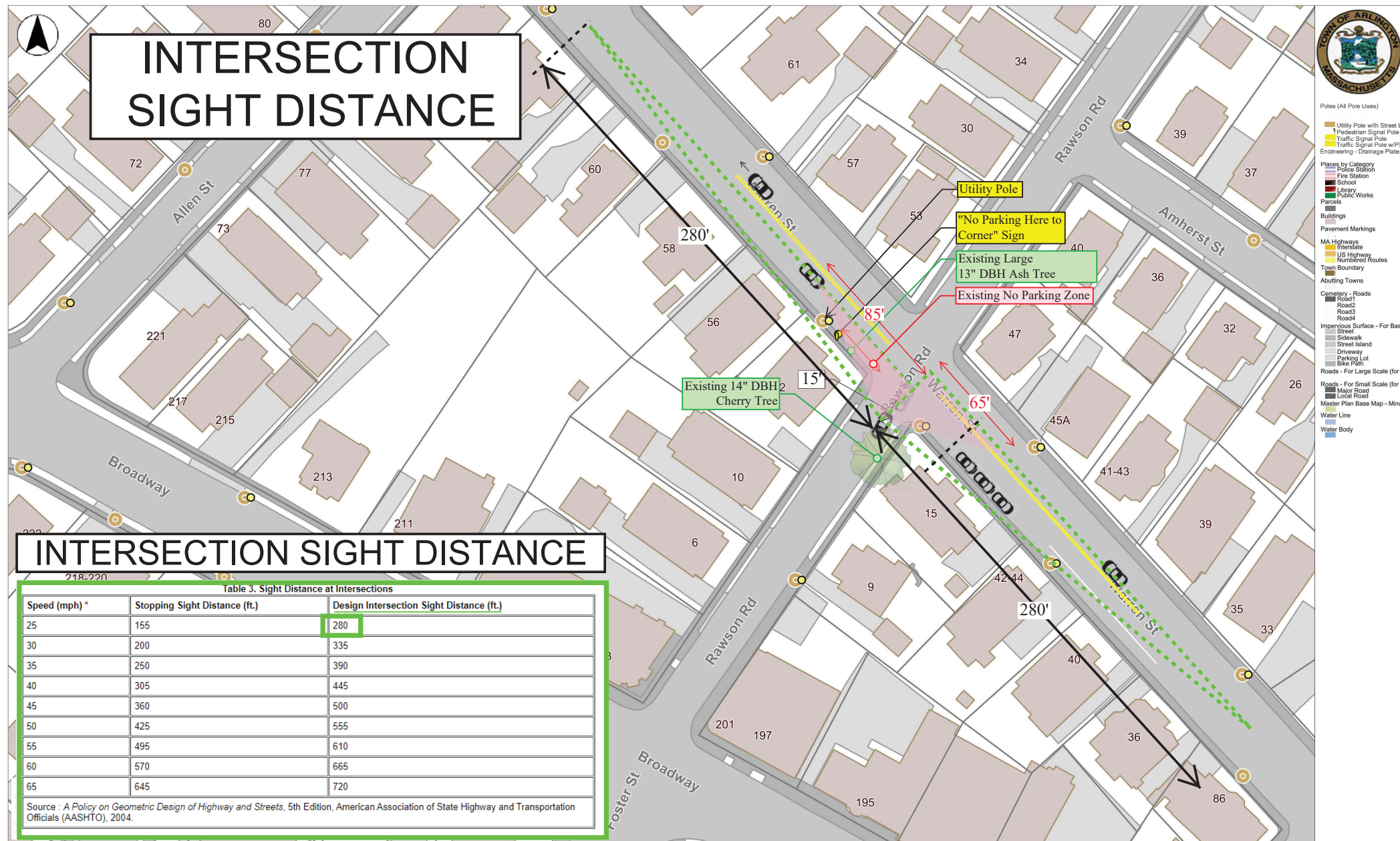
Scenario 2: Stopping Sight Distance on Grades

INTERSECTION SIGHT DISTANCE

Table 3. Sight Distance at Intersections

| Speed (mph) * | Stopping Sight Distance (ft.) | Design Intersection Sight Distance (ft.) |
|---------------|-------------------------------|--|
| 25 | 155 | 280 |
| 30 | 200 | 335 |
| 35 | 250 | 390 |
| 40 | 305 | 445 |
| 45 | 360 | 500 |
| 50 | 425 | 555 |
| 55 | 495 | 610 |
| 60 | 570 | 665 |
| 65 | 645 | 720 |

Source : A Policy on Geometric Design of Highway and Streets, 5th Edition, American Association of State Highway and Transportation Officials (AASHTO), 2004.



Rawson Road at Warren Street Intersection

AASHTO Sight Distance

Scenario 1: Stopping Sight Distance on Level Roadways

Table 3-1. Stopping Sight Distance on Level Roadways

| U.S. Customary | | | | | Metric | | | | |
|--------------------|------------------------------|--------------------------------|---|-------------|---------------------|-----------------------------|-------------------------------|--|------------|
| Design Speed (mph) | Brake Reaction Distance (ft) | Braking Distance on Level (ft) | Stopping Sight Distance Calculated (ft) | Design (ft) | Design Speed (km/h) | Brake Reaction Distance (m) | Braking Distance on Level (m) | Stopping Sight Distance Calculated (m) | Design (m) |
| 15 | 55.1 | 21.6 | 76.7 | 80 | 20 | 13.9 | 4.6 | 18.5 | 20 |
| 20 | 73.5 | 38.4 | 111.9 | 115 | 30 | 20.9 | 10.3 | 31.2 | 35 |
| 25 | 91.9 | 60.0 | 151.9 | 155 | 40 | 27.8 | 18.4 | 46.2 | 50 |
| 30 | 110.3 | 86.4 | 196.7 | 200 | 50 | 34.8 | 28.7 | 63.5 | 65 |
| 35 | 128.6 | 117.6 | 246.2 | 250 | 60 | 41.7 | 41.3 | 83.0 | 85 |
| 40 | 147.0 | 153.6 | 300.6 | 305 | 70 | 48.7 | 56.2 | 104.9 | 105 |
| 45 | 165.4 | 194.4 | 359.8 | 360 | 80 | 55.6 | 73.4 | 129.0 | 130 |
| 50 | 183.8 | 240.0 | 423.8 | 425 | 90 | 62.6 | 92.9 | 155.5 | 160 |
| 55 | 202.1 | 290.3 | 492.4 | 495 | 100 | 69.5 | 114.7 | 184.2 | 185 |
| 60 | 220.5 | 345.5 | 566.0 | 570 | 110 | 76.5 | 138.8 | 215.3 | 220 |
| 65 | 238.9 | 405.5 | 644.4 | 645 | 120 | 83.4 | 165.2 | 248.6 | 250 |
| 70 | 257.3 | 470.3 | 727.6 | 730 | 130 | 90.4 | 193.8 | 284.2 | 285 |
| 75 | 275.6 | 539.9 | 815.5 | 820 | 140 | 97.3 | 224.8 | 322.1 | 325 |
| 80 | 294.0 | 614.3 | 908.3 | 910 | | | | | |
| 85 | 313.5 | 693.5 | 1007.0 | 1010 | | | | | |

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

Scenario 2: Stopping Sight Distance on Grades

SIGHT DISTANCE:

- Insufficient sight distance can be a contributing factor in intersection traffic crashes. Intersection sight distance is typically defined as the distance a motorist can see approaching vehicles before their line of sight is blocked by an obstruction near the intersection. The driver of a vehicle approaching or departing from a stopped position at an intersection should have an unobstructed view of the intersection, including any traffic control devices, and sufficient lengths along the intersecting roadway to permit the driver to anticipate and avoid potential collisions. Examples of obstructions include crops, hedges, trees, parked vehicles, utility poles, or buildings. In addition, the horizontal and vertical alignment of the roadway approaching the intersection can reduce the sight triangle of vehicles navigating the intersection.

It is important for approaching motorists on the major road to see side street vehicles approaching the Stop sign, and for minor road motorists to see approaching major road vehicles before entering the intersection. Poor sight distance can lead to rear-end crashes on the approaches and to angle crashes within the intersection because motorists may be unable to see and react to traffic control devices or approaching vehicles.

Rawson Road Sight Distance Conditions

- Available sight distances at the north bound approach of Rawson Road at Warren Street are severely reduced due to obstructions caused by trees, utility poles, shrubs/hedges and vehicles parked on Warren Street. The following is a summary of the sight distance requirements for a minor street intersecting a major street with a 25 mph speed limit:

Recommended Intersection Sight Distance = 280 ft

Recommended Stopping Sight Distance = 155 ft

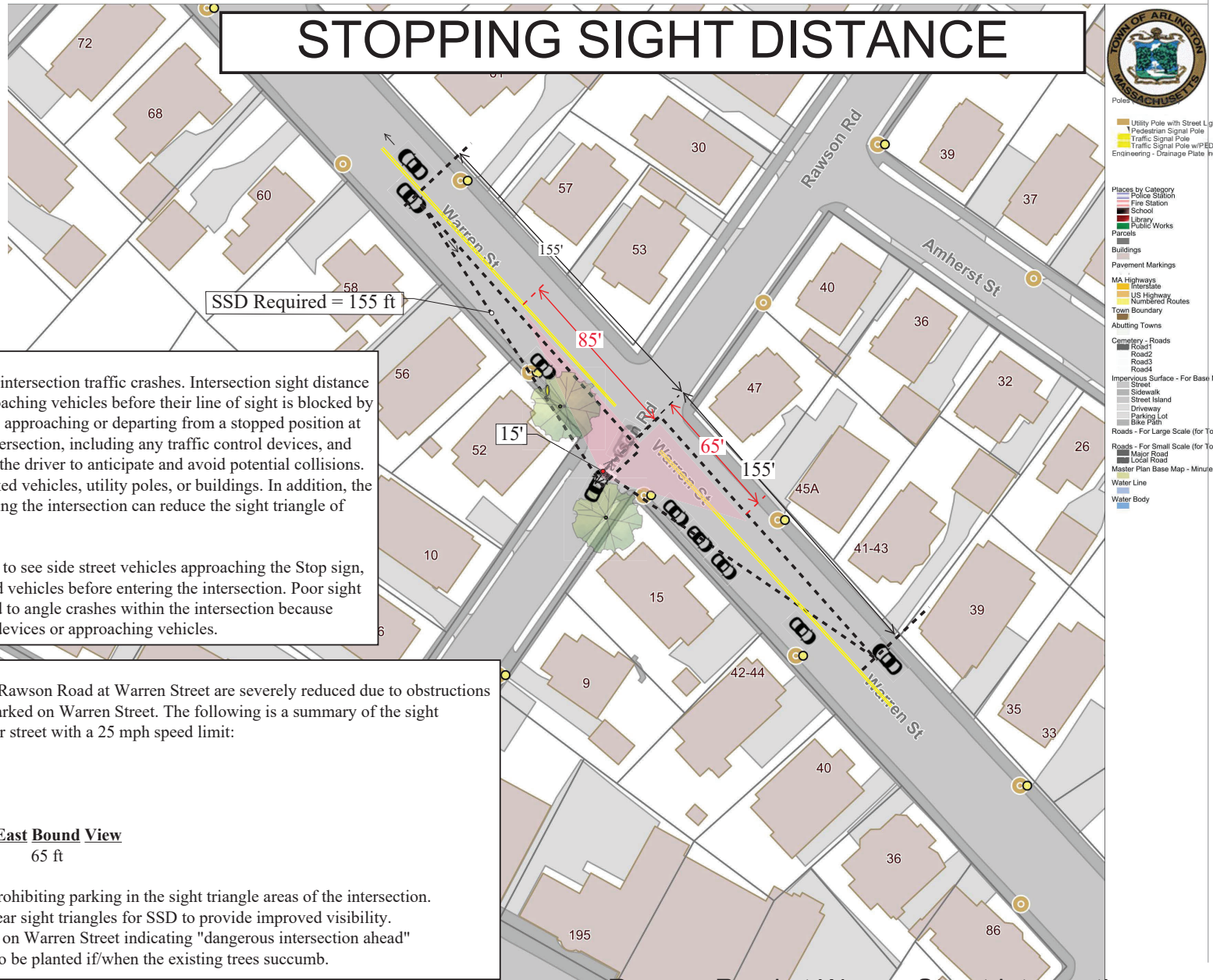
Actual sight distance is:

| | |
|------------------------|------------------------|
| West Bound View | East Bound View |
| 85 ft | 65 ft |

The available Stopping Sight Distance can be attained by prohibiting parking in the sight triangle areas of the intersection.

- 1) Restrict parking of vehicles within the recommended clear sight triangles for SSD to provide improved visibility.
- 2) Provide an Advance Warning Sign for eastbound traffic on Warren Street indicating "dangerous intersection ahead"
- 3) Notify Tree Warden to document request for No Trees to be planted if/when the existing trees succumb.

STOPPING SIGHT DISTANCE



Rawson Road at Warren Street Intersection

Proposed Conditions

Proposed No Parking Zone to ensure safe sighting distance

Proposed No Parking Zone to ensure safe sighting distance



- Poles (All Pole Uses)
 - Lamp Pole
 - Utility Pole
 - Utility Pole with Street Light
 - Pedestrian Signal Pole
 - Traffic Signal Pole
 - Traffic Signal Pole w/PED
 - Engineering - Drainage Plate Ind
- Places by Category
 - Police Station
 - Fire Station
 - School
 - Library
 - Public Works
- Parcels
- Buildings
- Pavement Markings
 - MA Highways
 - Interstate
 - US Highway
 - Numbered Routes
 - Town Boundary
 - Abutting Towns
 - Cemetery - Roads
 - Road1
 - Road2
 - Road3
 - Road4
 - Impervious Surface - For Base M
 - Street
 - Sidewalk
 - Street Island
 - Driveway
 - Parking Lot
 - Base Plat
 - Roads - For Large Scale (for Tow)
 - Major Road
 - Local Road
 - Roads - For Small Scale (for Tow)
 - Major Road
 - Local Road
 - Master Plan Base Map - Minutemen
 - Water Line
 - Water Body

Recommended Intersection Sight Distance = 280 ft
Recommended Stopping Sight Distance = 155 ft

Actual sight distance is:

| | <u>West Bound View</u> | <u>East Bound View</u> |
|--|------------------------|------------------------|
| | 85 ft | 65 ft |

Rawson Road Safety Recommendations - Available sight distances at the north bound approach of Rawson Road at Warren Street are severely reduced due to obstructions caused by trees, utility poles, shrubs/hedges and vehicles parked on Warren Street. The following is a summary of the sight distance requirements for a minor street intersecting a major street with a 25 mph speed limit:

The available Stopping Sight Distance should be increased, and can be attained by prohibiting parking in the sight triangle areas of the intersection. The following items are recommended improvements for the Warren/Rawson intersection.

- 1) Restrict parking of vehicles within the recommended clear sight triangles for SSD to provide improved visibility.
- 2) Provide an Advance Warning Sign for eastbound traffic on Warren Street indicating "dangerous intersection ahead"
- 3) Notify Tree Warden to document request for No Trees to be planted if/when the existing trees succumb.

Rawson Road at Warren Street Intersection

0 50 100 ft

Printed on 03/15/2023 at 05:18 PM